

## WAVELENGTH DIVISION MULTIPLEXING AND DE-MULTIPLEXING SYSTEM

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1	fiber Bragg grating	240	light beam
2	grating region	242	strayed portions
3	interlayer	244	interface
4	laser beam	246	interface
5	reflected beam	248	reflected portion
6	passed beam	250	passed portion
100	Bragg grating	302	substrate
102	laser beam	304	grating region
104	substrate	306	mask
106	reflective layer	308	grating pattern
108	grating region	310	interlayer array
110	interlayer		
112	first transmissive material	400	process
114	second transmissive material	402-412	step
116	over-fill layer	422-462	sub-step
118	reflected beam		
120	passed beam	500	linear grating
202	substrate	502	background material
204	photoresist layer	504	interlayer material
204a	unexposed region	506	thickness
204b	exposed region	508	separation
206	photomask	510	light beam
208	pre-designated pattern	512	reflected beam
212	light	514	passed beam
214	transmissive layer	600	planar grating
216	air gap	602	background
218	photoresist layer	604	cells
218a	unexposed region	606	XYZ-axes icon
218b	exposed regions	608	thickness
220	photomask	610	separation
222	grating pattern	612	thickness
224	light	614	separation
226	grating region	616	light beam
228	over-fill layer	618	diffracted beam
230	interlayer array	620	passed beam
232	transmissive layer		

700	cubical grating	1006	WDM device
702	background	1008	light beam
704	cells	1010	light target
706	XYZ-axes icon		
708	light beam	1100	de-multiplexing system
710	first diffracted beam	1102	light source
712	second diffracted beam	1104	light beam
714	passed beam	1106	WDM device
		1108	light beams
800	generic grating	1110	light targets
802	background		
804	cell	1200	multiplexing device
806	thickness	1202	first planar grating
808	light beam	1204	second planar grating
810	first surface	1206	third planar grating
812	first reflected portion	1208	first input beam
814	first refracted portion	1210	second input beam
816	second surface	1212	third input beam
818	second reflected portion	1214	fourth input beam
820	transmitted portion	1216	first output beam
822	second refracted portion	1218	second output beam
826	vertical separation	1220	third output beam
828	horizontal separation		
830	vertical separation	1300	multiplexing device
		1302	first cubical grating
850	grating	1304	second cubical grating
852	background	1306	third cubical grating
854	cells	1308	first input beam
856	horizontal thickness	1310	second input beam
858	vertical thickness	1312	third input beam
860	horizontal separation	1314	fourth input beam
862	first vertical separation	1316	fifth input beam
864	second vertical separation	1318	sixth input beam
866	first portions	1320	seventh input beam
868	first portions	1322	first output beam
868	second portions	1324	second output beam
		1326	third output beam
880	grating		
882	cells	1400	de-multiplexing device
884	first portions	1402	first planar grating
886	second portions	1404	second planar grating
888	third portions	1406	third planar grating
		1408	input beam
1000	multiplexing system	1410	first diffracted beam
1002	light sources	1412	first intermediate beam
1004	light beam	1414	second diffracted beam

1416 second intermediate beam  
1418 third diffracted beam  
1420 output beam

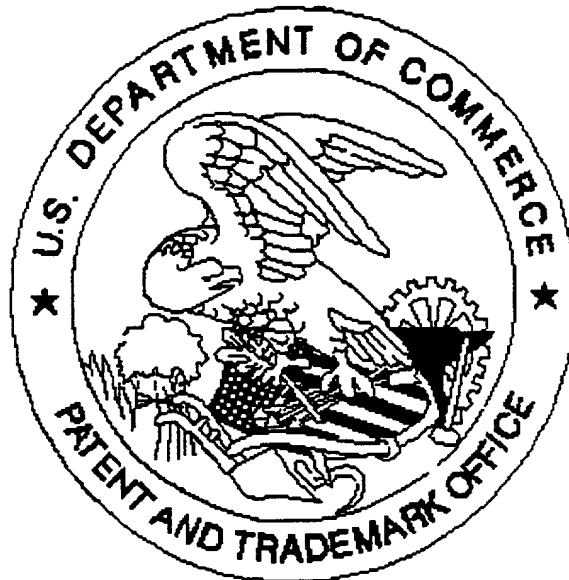
1500 de-multiplexing device  
1502 first cubical grating  
1504 second cubical grating  
1506 third cubical grating  
1508 input beam  
1510 first diffracted beam  
1512 second diffracted beam  
1514 first intermediate beam  
1516 third diffracted beam  
1518 fourth diffracted beam  
1520 second intermediate beam  
1522 fifth diffracted beam  
1524 sixth diffracted beam  
1526 output beam

1600 de-interleaver  
1602 center drating block

1602 center grating block  
1604 first grating block  
1606 second grating block  
1608a-f cubical gratings  
1610a-f gratings  
1612a-f gratings  
1614 input beam  
1616 input source  
1618 first output beam  
1620 first output target  
1622 second output beam  
1624 second output target

1700 interleaver  
1702 first input beam  
1704 second input beam  
1706 first input source  
1708 second input source  
1710 output beam  
1712 output target

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Scanned copy is best available. Drawing Fig 4D, 4E, 4J, 4K,  
4M, are very dark